

REMARKS

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

Election/Restrictions

Applicant's election without traverse of Group 11, claims in the reply filed on 3-11, 45-49, and 63-75 is acknowledged.

Claim Objections

Claims 69-70 are objected to because of the following informalities: There is a lack of antecedent basis for the laminating recited in claims 69-70. Appropriate correction is required.

Claims 69 and 70 have been amended without narrowing to replace "laminating" with a phrase that has antecedent basis. The applicant requests reconsideration and withdrawal of the objection.

Claims 3-7, 63-65, and 72-75 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaushik (U.S. Pat. No. 5,726,805). Kaushik teaches an optical device comprising a first reflective layer 20, a second reflective layer 20, substantially continuous layers of dielectric material 12, 16, each layer consisting of alternating high and low indices of refraction so that the optical output of the device includes substantially more light in wavelengths in a plurality of narrow wavelength bands (figs. 8-9) than light not in the plurality of wavelength bands.

Regarding claim 3, Kaushik does not disclose or suggest substantially continuous layers of dielectric material, each layer consisting essentially of a material having a different index of refraction (n) than the material of an adjacent layer, the layers disposed between the first reflective layer and the second reflective layer, constructed and arranged so that an optical output of the optical device includes substantially more light with wavelengths in a plurality of narrow wavelength bands than light with wavelengths not in the plurality of wavelength bands.

In column 4, lines 4 – 5, Kaushik states "The dielectric layer 12 includes a sub-wavelength periodic structure 16 formed therein...". Additionally, in Fig. 2, Kaushik shows that layer 12 occupies the entire distance between layers 20 of reflecting material, so element 16 is not a layer, but rather a structure within layer 12. Several figures of Kaushik also clearly show that structure 16 is not continuous.

Claims 4 – 7 are dependent on allowable claim 3.

Regarding claim 63, Kaushik does not disclose or suggest depositing onto a first substrate layers of dielectric material, each layer consisting essentially of a material having a different index of refraction (n) than the material of an adjacent layer. Not only is structure 16 not a layer, as described above, but structure 16 is not deposited. Structure 16 is formed by removing material to form trenches or grooves, or by irradiating portions of layer 12.

Claims 64 and 65 are dependent on allowable claim 63.

Claim 72 has been canceled. Regarding claim 73, Kaushik does not disclose or suggest processing light occurring within consecutive layers of higher and lower index-of-refraction materials. In column 4, lines 4 – 5, Kaushik states "The dielectric layer 12 includes a sub-wavelength periodic structure 16 formed therein...". Additionally, in Fig. 2, Kaushik shows that layer 12 occupies the entire distance between layers 20 of reflecting material, so element 16 is not a layer, but rather a structure within layer 12.

Claims 74 – 75 are dependent on allowable claim 73.

The applicant respectfully requests reconsideration and allowance of claims 3-7, 63-65 and 72-75

Claims 3-4, 7-8, 10, 63, 65-66, 72-73 and 75 are rejected under 35 U.S.C. 102(e) as being anticipated by Deter (U.S. Pat. No. 6,428,169). Deter teaches an optical device comprising a first reflective layer 7, a second reflective layer 11, substantially continuous layers of dielectric material 14, each layer consisting of alternating high and low indices of refraction so that the optical output of the device includes substantially more light in wavelengths in a plurality of narrow wavelength bands (figs. 3) than light not in the plurality of wavelength bands. Regarding claim 6, Deter could also be interpreted where the 11 is the first reflective layer and 7 is the second reflective layer. The applicant is directed to further review col. 3, lines 50-60.

Regarding claim 3, Deter does not disclose or suggest a first reflective layer and a second reflective layer. The examiner's construing element 11 as a reflective layer is improper. Element 11 is an optical filter. The recited reflective layer does not read on an optical filter. At column 7, lines 37 – 41 Deter discloses that the optical filter is constructed in such way that it passes light of certain wavelengths, while light of other wavelengths is prevented from passing through. Nowhere does Deter describe element 11 as reflecting light.

Claims 4 and 7 – 8, and 10 are dependent on allowable claim 3.

The examiner did not expressly reject claim 6 as anticipated by Deter. However the examiner did mention claim 6 in specific grounds for rejection. If the examiner did intend to reject claim 6 as anticipated by Deter, claim 6 is dependent on allowable claim 3.

Regarding claim 63, Deter does not disclose or suggest depositing onto layers of dielectric material a first reflective layer, nor has the examiner alleged that it does. The examiner construes elements 7 and 11 as reflecting surfaces. Element 7 is a surface of element 13 and is not deposited on any layers of dielectric material. Element 11 is shown as positioned directly on element 7 and not on any layers of dielectric material. In addition, as stated above, the examiner's construing element 11 as a reflective layer is improper. Element 11 is an optical filter. The recited reflective layer does not read on an optical filter. At column 7, lines 37 – 41 Deter discloses that the optical filter is constructed in such way that it passes light of certain wavelengths, while light of other wavelengths is prevented from passing through. Nowhere does Deter describe element 11 as reflecting light.

Claims 65 and 66 are dependent on allowable claim 63.

Claim 72 has been canceled. Regarding claim 73, Deter does not disclose or suggest processing light including reflecting light, by a first and second reflective layer. The examiner's construing element 11 as a reflective layer is improper. Element 11 is an optical filter. The recited reflective layer does not read on an optical filter. At column 7, lines 37 – 41 Deter discloses that the optical filter is constructed in such way that it passes light of certain

wavelengths, while light of other wavelengths is prevented from passing through. Nowhere does Deter describe element 11 as reflecting light.

Claim 75 is directly or indirectly dependent on allowable claim 73.

The applicant respectfully requests reconsideration and allowance of claims 3-4, 7-8, 10, 63, 65-66, 72-73 and 75.

Claims 5, 9, 45-49 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deter (U.S. Pat. No. 6,428,169) in view of Yamada (U.S. Pat. No. 5,148,309). Deter teaches the salient features of the claimed invention except for an aluminum reflective layer and polarization. Yamada teaches in col. 4, line 33 that aluminum is known as the reflection material in reflective projection screens. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the aluminum taught by Yamada for the purpose of utilizing readily available materials. The applicant should note that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In Re Leshin*, 125 USPQ 416. Yamada teaches in the abstract that it was known to utilize a polarizing layer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Yamada for the purpose of expansive diffusion without deterioration of effective function.

Claims 5 and 9 are directly or indirectly dependent on allowable claim 3.

Regarding claim 45 neither Deter, Yamada, nor any permissible combination of Deter and Yamada teaches or suggests a matte surfaced diffuser. Deter specifies only that light is "diffusely reflected" col. 8, line 24 without specifying the type of diffuser. Yamada teaches a diffusion layer 10, but does not specify characteristics of the diffusion layer. The drawings suggest a patterned diffuser. In the specification of the application on page 26, "Another feature of the high contrast projection screen..." matte diffusers are presented as examples of diffusers with irregular surfaces.

Claims 46 - 48 are directly or indirectly dependent on allowable claim 45.

Claim 71 is directly or indirectly dependent on allowable claim 63.

The applicant respectfully requests reconsideration and allowance of claims 5, 9, 45 - 49 and 71.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deter (U.S. Pat. No. 6,428,169) in view of Portlier (U.S. Pat. No. 3,942,869). Deter teaches the salient features of the claimed invention except for the side greater than 7 inches. Portlier teaches in col. 1, line 45 that it was known to provide a screen greater than 7 inches. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Portlier for the purpose of large panoramic viewing.

Claim 11 is directly or indirectly dependent on allowable claim 3.

The applicant respectfully requests reconsideration and allowance of claim 11.

Claims 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaushik (U.S. Pat. No. 5,726,805) in view of Ohsako (U.S. Pub. No. 20040061935). Deter teaches the salient features of the claimed invention except for the diffusing substrate. Ohsako teaches that it was known to provide the dielectric layers on a diffusing substrate. The applicant is directed to review the figures. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Ohsako for the purpose of increasing viewing angles.

Claims 66 – 68 are directly or indirectly dependent on allowable claim 63.

The applicant respectfully requests reconsideration and allowance of claims 66 – 68.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaushik (U.S. Pat. No. 5,726,805) in view of Portlier (U.S. Pat. No. 3,942,869). Kaushik teaches the salient features of the claimed invention except for the size greater than 7 inches. Portlier teaches in col. 1, line 45 that it was known to provide a screen greater than 7 inches. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Portlier for the purpose of large panoramic viewing.

Claim 11 is directly or indirectly dependent on allowable claim 3.

The applicant respectfully requests reconsideration and allowance of claim 11.

Claims 69-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaushik (U.S. Pat. No. 5,726,805) in view of Matsuda (U.S. Pat. No. 5,361,163). Kaushik teaches the salient features of the claimed invention except for the radiation curing. Matsuda teaches that it was known to utilize radiation curing resin adhesive in a projection screen. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Matsuda for the purpose of allowing adjustments before setting.

Claims 69 -- 70 are directly or indirectly dependent on allowable claim 63.

The applicant respectfully requests reconsideration and allowance of claims 69 -- 70.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Please apply any charges or credits to deposit account 06-1050, Order No. 02103-603001.

Date: _____

1/3/04

Respectfully submitted,



David L. Feigenbaum
Reg. No. 30,378
Attorney for Application Owner

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906